



# UNITED STATES PATENT AND TRADEMARK OFFICE

CD  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/595,186	06/16/2000	Janez Funda	Y0992-080D	6794

7590                    09/16/2003

IBM Corporation  
PO Box 218  
Yorktown Heights, NY 10598

[REDACTED] EXAMINER

QADERI, RUNA S

ART UNIT	PAPER NUMBER
3737	7

DATE MAILED: 09/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/595,186	FUNDA ET AL.
	<b>Examiner</b>	Art Unit
	Runa S. Qaderi	3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 04 December 2000.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 18-24 and 37-43 is/are pending in the application.
  - 4a) Of the above claim(s) 37-43 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 18-24 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_ .
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6) <input type="checkbox"/> Other: _____ .

## DETAILED ACTION

### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 18-24, drawn to a method of controlling the position of a surgical instrument inside a patient's body, classified in class 600, subclass 425.
- II. Claims 37-43, drawn to a system of positioning for two or more surgical instruments relative to a patient's body, classified in class 600, subclass 407.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are directed to unrelated systems of positioning medical devices relative to a patient's body. Invention I is directed to providing anatomical feature images to position surgical instruments inside the body, while invention II is directed to a voice recognition system that transfers commands between operator and system to position surgical instrument relative to a patient's body. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Louis J. Percello on September 2, 2003 a provisional election was made with traverse to prosecute the invention of Group I, claims 18-24. Affirmation of this election must be made by applicant in replying to this Office action. Claims 37-43 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### ***Specification***

The abstract of the disclosure is objected to because it is not a single paragraph and it exceeds 150 words limit. Correction is required. See MPEP § 608.01(b).

The examiner suggests the following arrangement for the layout of the specification. Specifically examiner notes that presently in the specification “Brief Description of Drawings” precedes the “Summary of the Invention”.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant’s use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase “Not Applicable” should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), “Sequence Listings” (37 CFR 1.821(c)),

Art Unit: 3737

and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).  
"Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.

- (1) Field of the Invention.
- (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 18 and 19 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Abela et al.

The system Abela et al. teaches an angioscopic method that can designate the 3 dimensional distance of a point within the body relative to the tip of the angioscope. Column 12 lines 44 through column 13 line 56 describes the positional information that is obtained by the angioscope. The angioscope is interpreted as the first surgical instrument having means of transmitting an image outside the body. Further the point or object or scene as recited by Taylor is interpreted as the anatomical feature. Finally the recitation to manipulation of the instrument, column 12 lines 64-67, of Taylor incorporates the positioning of the first surgical instrument. Figure 10 diagrams the image-processing scheme for determining the 3-D positional information.

Claims 18, 19, and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Taylor (Pat# 5,402,801)

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

The apparatus of Taylor, specifically Fig. 10, teaches providing the method of controlling the position of a surgical instrument as claimed in 18, 9, and 21. An system 242 comprises a surgical first instrument 254 that has imaging transmitting 266 for satisfying the applicant's limitation to a first surgical instrument transmitting an image out of the patient's body. Column 21 lines 34-41 of Taylor teach that the surgeon can designate a particular anatomical feature within the image. The transmitting image is sent to a monitor for display and to a image processor and/or computer. As taught by the applicant claims the image processor and/or computer provides relative positional information of the surgical instrument to the patient's anatomy (specifically to an anatomical feature when designated). The positional information includes location and orientation therefore providing 3-D positional information as taught by applicant. The positional information is used to move the surgical instrument to desired locations and/or to provide the desired graphical display of the anatomical feature. Regarding claims 21, Taylor teaches that a second surgical instrument can further be incorporated into the system and it's position or reposition is satisfied by the same methods as that of the first surgical instrument.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20 are 22-24 rejected under 35 U.S.C. 103(a) as being obvious over Taylor (Pat# 5,402,801).

The applied reference has a common assignment and one common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at

the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

The system of Taylor satisfies the methods of controlling the positioning a surgical instrument within a patient's body as claimed in 18, 19 and 21.

Regarding claim 20 Taylor teaches that a particular anatomical feature can be designated and further it's positional information relative to the surgical instrument can be obtained. The patent further teaches that this information can be used to modify the graphical display provided to the surgeon. Although the patent does not explicitly recite said graphical display as graphic's object superimposed on image of the anatomical feature it would have been obvious for a person of ordinary skill in the art to have provided such because it is a well known available displaying technique such that the operator can quickly and easily monitor the surgical environment. Further it is a well known expedient in the art of image guided surgery to provide for means and methods to better control and visualize the invasive procedure.

Regarding claims 22-24 Taylor teaches that surgical instrument can move in a  $\theta_x$ ,  $\theta_y$ , and  $\theta_z$  position. A desired anatomical feature can be designated the instrument can be located such that the camera scans over an indicated path. The indicated path is interpreted as a vantage point as claimed by applicant. Further a feature "zoom" is taught by the patent such that the surgical instrument moved along an axis of view as claimed by applicant. Regarding claims 22-23 Taylor does not teach providing a constant distance between the surgical instrument and anatomical feature. Given the movement capabilities of the system of Taylor it would have been obvious to a person

or ordinary skill in the art to provide the step of maintaining a constant distance. Further the system and method of Taylor does not preclude from providing movement of the surgical instrument relative to the anatomical feature in one axis or plurality of axis. This is further supported by the recitation to a "surgical path" of Taylor. A "surgical path" incorporated the path as claimed by applicant. Regarding claim 24 Taylor does not teach the incremental movement of the "zoom" function of the surgical instrument. It is obvious to one or ordinary skill in the art at the time the invention was made to provide any available motion mechanism along the axis of view because the end result of "zoom" is satisfied. The method moving incrementally to a desired zoom or moving directly to the desired zoom provided the same image.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Runa S. Qaderi whose telephone number is (703) 308-8155. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dennis W. Ruhl can be reached on (703) 308-2262. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

*RSQ*  
RSQ

*Dennis W. Ruhl*  
DENNIS RUHL  
PRIMARY EXAMINER